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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,186	01/29/2001	Lawrence Bernard Kool	RD-28,011	7166

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
1746	13

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/771,186	Applicant(s) KOOL ET AL.	
	Examiner Sharidan Carrillo	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it fails to positively recite a step of removing the oxide material. Claim 11 is indefinite because it is unclear what is meant by pure water. Clams 15, 16, and 25 are indefinite because it is unclear whether the percentages are expressed as weight or volume percent. Claim 23 is indefinite because it is unclear what conditions would be "sufficient to remove substantially all of the oxide material and all of the coating material. The claim fails to set forth the conditions necessary for the removal of the oxide and coating material. Claim 23 is further indefinite because it is unclear what one of ordinary skill in the art would consider as "reactive conditions".

In claim 27, it is unclear whether the coating of step (ii) is worn or damaged. Further, to what extent would one of ordinary skill in the art consider the protective coating worn. Claim 29 is indefinite because it is unclear how the oxide material directly contacts the substrate since the oxide material is present on the coating. Claim 33 is indefinite because it is unclear what one of ordinary skill in the art would consider as "high velocity"

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-7, 9-11, 13,15-18, 20-21, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanai et al. (56-166386).

In reference to claim 1, Kanai et al. teach a method of removing lead oxide from a substrate comprising contacting the substrate with hydrosilicofluoric acid (H2SiF6), followed by coating the substrate with a new oxide layer.

In reference to claims 2 and 6, Kanai et al. teach H2SiF6. In reference to claims 3 and 5, refer to the abstract. In reference to claim 7, Kanai et al. teach an acid/salt. In reference to claims 9 and13, Kanai et al. teach acetic acid. In reference to claims 10 and 11, the limitations of pH are met since Kanai et al. teach the same acid as that of the instant invention. In reference to claims 15-18, 20-21, and 34 refer to the abstract.

5. Claims 1-4, 6-8, 17-19, 22, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Brien (5817182).

O'Brien teaches removal of oxide from a semiconductor wafer using HF. In col. 2, lines 46-59, O'Brien teaches SiO2 reacts with HF to form aqueous H2SiF6 solution which further etches the silicon dioxide. In reference to claims 1, 2, and 6-8, refer to col. 2, lines 50-53. In reference to claims 3-4, refer to col. 2, lines 25-27. In reference to claim 17, refer to col. 4, lines 48-50. In reference to claim 18, refer to col. 2, lines 30-31. In reference to claim 19, refer to col. 4, lines 40-41. In reference to claim 22, O'Brien teaches the addition of NH4F (col. 2, lines 27-29). In reference to claim 34, refer to the abstract.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 6, 9-26, and 34 rejected under 35 U.S.C. 102(e) as being anticipated by LaGraff et al. (6420178)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In reference to claims 1-2, 23-24 and 34, LaGraff et al teach a method of removing oxide coating from gas turbine engines components using a composition comprising phosphoric acid and hydrofluorosilicic acid (col. 1, lines 1-25, Figs. 7 and 12, col. 7, lines 35-60). In reference to claims 3 and 6, refer to Fig. 12. In reference to claims 9-16 and 25, refer to Fig. 12. The limitations of pH would be met since LaGraff et al. teach the same acid as that of the instantly claimed invention. In reference to claims 17-23, refer to col. 7, lines 35-55, and col. 5-6 bridging. In reference to claim 26, refer to col. 1, lines 1-35.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-7, 9-13, 15-22, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (3062748).

In reference to claim 1, Harrison teaches a composition for use in metal cleaning

such as descaling of ferrous lines, the composition comprising fluoride compounds H2SiF6, and H2TiF6. In reference to claim 1, Harrison teaches the removal of scale (i.e. scale is made of oxide) from the ferrous line (col. 2, lines 35-37, col. 6, lines 34-35, 53-55). In reference to claim 2, refer to col. 2, lines 35-37. In reference to claims 3, 4, and 6, refer to col. 2, lines 43-45. In reference to claims 5 and 7, refer to col. 3, Table 1 which teaches ammonium hexafluorotitanate. Also refer to Table II. In reference to claims 9-13, Harrison teaches HCl. The limitations of pH are met since Harrison teaches the same acid as that of the instant invention. In reference to claim 15, refer to col. 3, lines 30-31. In reference to claim 16, 15% HCl reads on the limitation of about 20%. In reference to claim 17, Harrison teaches treating the metal coupons in HCl/fluoride containing solutions. In reference to claims 18-21, refer to col. 4, lines 70-71. In reference to claim 22, refer to col. 2, lines 55-57. In reference to claim 34, refer to col. 6, lines 50-55.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-14, and 18-24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15, and 18-23 of copending Application No. 09/591531. Although the conflicting claims are not identical, they are not patentably distinct from each other because the applications are directed to the removal of a coating from a surface of a substrate using an aqueous acidic composition having the formula HxAF6, or precursors to the acid, where A is selected from the group consisting of Si, Ge, Ti, and Ga, and x is 1-6..

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

13. Claims 27-33 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

14. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a method of replacing a coating by first removing the oxide material with claimed aqueous composition, followed by removal of the coating using the claimed aqueous composition, and further treatment of the substrate by applying a new coating.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stankey teaches a method of removing coatings using hydrofluosilicic acid. Kendell et al. teach a process of cleaning aluminum alloys. Frey teaches a method of stripping the oxide film. Thoma teaches a method of etching using H2SiF6. Kawasaki et al. teach a method of treating a metal surface with SiF6. Gray et al. teach a method of removing metal oxide using

hexafluorotitanate. Kool et al. teach a method of removing oxides and coatings from a substrate. Nagaei teaches a method of removing Al powder using NaSiF6.

16. Applicant is reminded of their ***duty to disclose any and all pertinent prior art references***, since the prior art of EP1162286, by applicant, refers to a copending U.S. patent application 09/591531, which constitutes a provisional-obviousness type double patenting rejection.

17. The previous prior art rejections are withdrawn in view of the newly filed amendments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 703-308-1876. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 703-308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7719 for regular communications and 703-305-7719 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc
May 8, 2003

SHARIDAN CARRILLO
PRIMARY EXAMINER